

CLAIMS

1. In a Java computing environment, a Java heap suitable for storing Java
5 objects therein, wherein said Java heap comprises:

at least one Java heap portion that is designated for storing Java
objects with similar traits.

2. A Java computing environment as recited in claim 1,

10 wherein said at least one Java heap portion is designated to store
objects of a class, and

wherein only objects of said class are stored in said at least one Java
heap portion.

15 3. A Java computing environment as recited in claim 1,

wherein said Java heap includes a plurality of Java heap portions, and
wherein each of said plurality of Java heap portions is designated for
storing Java objects with similar traits.

20 4. A Java computing environment as recited in claim 3, wherein each of said
plurality of Java heap portions is designated to store objects of the same size.

5. A Java computing environment as recited in claim 1, wherein said at least
one Java heap portion is implemented as an array.

25 6. A Java computing environment as recited in claim 1, wherein said at least
one Java heap portion is designated to store objects with similar life spans.

7. A Java computing environment as recited in claim 1, wherein said at least
30 one Java heap portion is designated to store objects of the same size.

8. A Java computing environment as recited in claim 1, wherein said at least one Java heap portion is designated to store objects that do not reference other objects.

5 9. A Java computing environment as recited in claim 1, wherein said at least one Java heap portion is designated to store objects of the same class.

10. A method for creating Java objects in a heap, said method comprising:

translating a Java Bytecode into one or more commands, said Java

10 Bytecode representing an instruction for creating a Java object, and wherein said one or more commands can operate to allocate said Java object in a portion of heap designated for said object; and

executing said one or more commands to create said object in said portion of said heap associated with said object.

15 11. A method as recited in claim 10, wherein said method further comprises:

marking a Java Bytecode representing an instruction for creating a Java object.

20 12. A method as recited in claim 11,

wherein said marking is performed at compile time; and

wherein said one or more commands are created at compile time.

13. A method as recited in claim 10,

25 wherein said portion of the heap is designated for allocation of objects with similar traits; and

wherein objects that do not have similar traits as said object are not allocated in said portion of the heap.

30 14. A method of creating Java objects, said method comprising:

compiling one or more commands suitable for allocation of Java objects;

executing said one or more commands to allocate said Java objects in a designated portion of heap memory; and

wherein said Java objects are created in said designated portion of heap memory.

5

15. A method as recited in claim 14, wherein said Java objects have a similar trait.

16. A method as recited in claim 15, wherein Java objects that do not have said similar traits are not allocated in said designated portions of heap memory.

10

17. A method as recited in claim 16, wherein said similar traits can be: class, size, number of fields, or life span of said Java objects.

15

18. A computer readable medium including computer program code for creating Java objects in a heap, said computer readable medium comprising:

computer program code for translating a Java Bytecode into one or more commands, said Java Bytecode representing an instruction for creating a Java object, and wherein said one or more commands can operate to allocate said Java object in a portion of heap designated for said object; and

20

computer program code for executing said one or more commands to create said object in said portion of said heap associated with said object.

19. A computer readable medium as recited in claim 18, wherein said computer readable medium further comprises:

computer program code for marking a Java Bytecode representing an instruction for creating a Java object.

25

20. A computer readable medium as recited in claim 19, wherein said marking is performed at compile time; and

30

wherein said one or more commands operating to allocate said Java object in said portion of said heap are created at compile time.

5

[illegible]